Remarks

In the Office Action mailed January 9, 2006:

1. Claims 1-7, 9-11, 13-21, 23-24, 26-27, 30, 32, 35-39, 41, 47, 50, 56-58 and 62-64 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,367,517 (Cidon);
2. Claims 8, 22, 28-29, 33-34 and 59-61 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cidon, in view of U.S. Patent No. 6,934,752 (Gubbi);
3. Claims 12, 31, 42-43, 45, 48-49, 51-52 and 54-55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cidon, in view of U.S. Patent No. 6,937,580 (Heatwole);
4. Claims 40, 44 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cidon, in view of U.S. Publication No. 2002/0071450 (Gasbarro);
5. Claim 53 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Cidon and Heatwole, in view of Gubbi; and
6. Claim 25 was objected to as being dependent upon a rejected claim.

I Cidon (U.S. Patent No. 5,367,517)

A. Cidon Does Not Employ a Fixed Desired Bandwidth and a Modifiable Target

In a claimed embodiment of the invention (e.g., claims 1, 12), a communication dispatched from a source node to a destination node includes a modifiable value and a fixed value representing bandwidths for a communication channel between the source and destination nodes. The bandwidth represented by the fixed value can *never be less* than the modifiable value because the fixed value represents the source node's desired or optimal bandwidth for the channel. The modifiable value represents a target bandwidth, and intermediate nodes may adjust the modifiable value to reflect how much bandwidth they can actually allocate to the channel.

In Cidon, a reservation request packet includes maximum (e.g., B_max) and minimum (e.g., B_min) bandwidth values, but it is the maximum value that is modifiable; the minimum value is fixed. Thus, Cidon's fixed bandwidth value (B_min) can *never be greater* than the modifiable bandwidth value (B_max).

B. In Cidon, a Downstream Intermediate Node Cannot Allocate More Bandwidth than an Upstream Intermediate Node

As explained above in Section I.A, in embodiments of the present invention, a value representing a target bandwidth for a communication channel may be modified by intermediate nodes based on their available bandwidth. A value representing a desired bandwidth accompanies the modifiable value but is *fixed.*

As explained in the present application (e.g., page 16, lines 6-13), a downstream intermediate node may allocate bandwidth based on the desired bandwidth rather than the target bandwidth that an upstream intermediate node was able to allocate. Therefore, the downstream node may allocate more bandwidth to the channel than the upstream node did.

In contrast, in Cidon, a downstream intermediate node can never allocate more bandwidth than an upstream intermediate node. In particular, if an upstream intermediate node decreases the maximum bandwidth setting (B_max) to whatever it allocates to a channel, downstream intermediate nodes never learn that the source node actually desires a higher bandwidth and therefore would never allocate more bandwidth than the upstream node(s).

II Selected Claims

A. Claims 1-11, 12 & 65

Claims 1 and 12 were amended to make it clearer that, in this embodiment of the invention, a communication carries two values – a modifiable value representing a target bandwidth and a fixed value representing a desired or optimal bandwidth. The modifiable value can never be greater than the fixed value. As described above in Section I.A, in Cidon it is the *maximum* bandwidth value that is modifiable, and it can never be *less* than the fixed minimum bandwidth value. Thus, Cidon teaches away from the invention as recited in claims 1 and 12.

Claim 65 was added to reflect an embodiment of the invention in which a downstream relay element allocates more bandwidth to a communication channel than an upstream relay element. As described above in Section I.B, this is impossible in the Cidon system.

Claim 7 was cancelled.

B. Claims 13-30 & 31

Claims 13 and 31 were amended to incorporate the subject matter of claim 25, which was objected to, and the subject matter of intervening claims 23 and 24. Claims 23-25 were cancelled.

C. Claims 32-48, 49

Claims 32 and 49 have been amended to reflect an embodiment of the invention in which a downstream intermediate node may allocate to a communication channel a bandwidth greater than the bandwidth allocated to the channel by an upstream intermediate node. As described above in Section I.B, this is impossible in Cidon because intermediate nodes in Cidon adjust Bmax and downstream intermediate nodes are never informed of a higher bandwidth desired by the source node.

Claims 38-39 were cancelled.

D. Claims 50-51

Claims 50-51 were cancelled without prejudice against their re-introduction.

E. Claims 52-55

Claim 52 was amended to make it clearer that, in this embodiment of the invention, the value representing the originator's requested bandwidth is fixed, and the value representing the target bandwidth is modifiable, but the target bandwidth can never be greater than the requested bandwidth. As described above in Section I.A, in Cidon it is the *maximum* bandwidth value that is modifiable, and it can never be *less* than the fixed minimum bandwidth value.

F. Claim 56

Claim 56 was cancelled without prejudice against its re-introduction.

G. Claims 57-63

Claim 57 was amended to reflect an embodiment of the invention in which an intermediate node can allocate to a communication channel a bandwidth equal to or greater than a modifiable target bandwidth allocated to the communication channel by an upstream

intermediate node. As described above in Section I.B, this is impossible in Cidon because intermediate nodes in Cidon adjust Bmax and downstream intermediate nodes are never informed of a higher bandwidth desired by the source node.

Amended claim 57 also specifies that a fixed requested bandwidth for the channel is never less than the target bandwidth. As described above in Section I.A, in Cidon it is the *maximum* bandwidth value that is modifiable, and it can never be *less* than the fixed minimum bandwidth value.

Claim 62 was cancelled.

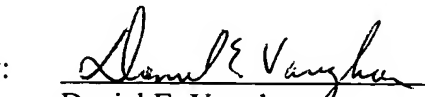
H. Claim 64

Claim 64 was cancelled without prejudice against its re-introduction.

CONCLUSION

No new matter has been added with the preceding amendments. It is submitted that the application is in suitable condition for allowance. Such action is respectfully requested. If prosecution of this application may be facilitated through a telephone interview, the Examiner is invited to contact Applicant's attorney identified below.

Respectfully submitted,

Date: March 14, 2006 By:  42,199

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